

## **REMARKS**

Claims 1-26 are the claims pending in the Application.

Applicant thanks the Examiner for acknowledging the claim for foreign priority and the receipt of the priority document.

Further, Applicant thanks the Examiner for reviewing and considering the references cited in the Information Disclosure Statements filed on March 28, 2001 and May 21, 2003.

The Examiner objected to the Abstract of the Disclosure as exceeding the 150 word limit. Submitted herein is a new Abstract that is shorter than 150 words. Therefore, this objection should now be withdrawn.

The Specification, page 3, line 26, contained a minor typographical error to which the Examiner did not object. The paragraph is amended. This amendment introduced no impermissible new matter.

### ***Rejection under 35 U.S.C. § 102(e)***

In the Office Action, the Examiner rejects all of the claims (claims 1-26) under 35 U.S.C. § 102(e) as being anticipated by Sugimoto, U.S. Patent No. 6, 493,654. This rejection is traversed.

Among the problems recognized and solved by Applicant's claimed invention is that of calculating and using a mix rate of patterned defects for LSI (Large Scale Integration) defect analysis, instead of merely using an expectant value function. According to an aspect of Applicant's claimed invention, a defect mix rate may be a ratio of the number of regular patterned defects to the total number of defects (See for example Applicant's disclosure, page 12), or a value based on such a ratio. According to an aspect

of Applicant's claimed invention, the use of an expectant value function alone to analyze a defect pattern may have the undesirable effect of setting off an inappropriate alarm, because even if the rate of pattern defects remains the same, the value of the expectant value function may increase.

For at least the following reasons, Applicant's claimed invention is neither anticipated by nor obvious from the cited prior art. By way of example, independent claims 1, 4, 10, 13 and 19 require calculating a mix rate of regular patterned defects from the expectant value function.

Sugimoto discloses a fault distribution analyzing system in which the expectant value function,  $T(f)$ , is determined, and if  $T(f)$  is greater than a threshold value, such as one, then the fault distribution is determined to be an irregular fault distribution. On the other hand, if  $T(f)$  is determined to be less than one, then the fault distribution is determined to be regular. Thus, for example, Sugimoto discloses that the expectation function value,  $T(f)$ , is calculated at step S106 of Fig. 20 (Sugimoto, col. 11, lines 37 – 55), and that the resulting  $T(f)$  is analyzed, such that when it exceeds a threshold such as one, then at steps S107 to S109 of Fig. 20, the fault distribution is determined to be irregular (Sugimoto, col. 11, line 56-col. 12, line 2).

Sugimoto does not disclose or suggest calculating a mix rate of defects from the expectant value function, as *inter alia*, required by independent claims 1, 4, 10, 13 and 19. Therefore, Sugimoto does not disclose or suggest the recitations of independent claims 1, 4, 10, 13 and 19.

In fact, Sugimoto belongs to the prior art identified by Applicant's disclosure, because Sugimoto does not disclose or suggest the problems recognized and

solved by Applicant's claimed invention. That is, Sugimoto uses the expectant function value,  $T(f)$ , to determine whether or not a fault pattern is regular. However, Sugimoto does not disclose or suggest calculating a mix rate of defects from the expectant value function.

Claims 2 and 3 depend from independent claim 1, claims 5-9 depend from independent claim 4, claims 11 and 12 depend from independent claim 10, claims 14-18 depend from independent claim 13, and claims 20-26 depend from independent claim 19. Therefore, claims 2, 3, 5-9, 11, 12, 14-18 and 20-26 incorporate novel and nonobvious features of their respective base claims, and are patentable distinguishable over the prior art for at least the reasons that independent claims 1, 4, 10, 13 and 19, respectively, are patentable distinguishable over the prior art.

In view of the foregoing discussion, Applicant believes that the Application is now allowable, and respectfully requests that the Examiner reconsider the rejections and allow the Application. Should the Examiner have any questions regarding this Amendment or the Application generally, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,



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